If you are using a printed copy of this procedure, and not the on-screen version, then you MUST make sure the dates at the bottom of the printed copy and the on-screen version match. The on-screen version of the Collider-Accelerator Department Procedure is the Official Version. Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A

C-A OPERATIONS PROCEDURES MANUAL

14.2.2 EMS Training for Tandem Van de Graaff Facility

Text Pages 2 through 5

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials

Approved: ***Signature on File*** _____
Collider-Accelerator Department Chairman

Date

R. Karol

14.2.2 EMS Training for Tandem Van de Graaff Facility

This package has been designed to aid in the delivery of required job-specific training for the following TVDG activities identified in the environmental process assessment:

- Industrial waste generation
- Hazardous waste generation
- Radioactive waste generation
- Atmospheric discharges
- Storage/use of chemicals
- Storage/use of radioactive material
- Use of equipment which contains PCBs

Your position has been determined to have a significant potential to impact the environment. Thus, C-A Department Management has prepared the questions & answers on the following pages for your specific work/processes.

This environmental material is incorporated into your current job and procedure training. If you have specific questions about this information after you read the material, contact the C-A Department ESH&Q Division Head, Ray Karol (mailto:rck@bnl.gov).

You may keep this material as a handout and use it as a reference aid.

This specific training course is linked to your job-training assessment (JTA). You must read and acknowledge this material as part of the qualification to perform operations at the TVDG facility. Please fill out the Read and Acknowledgement form and return it promptly.

Read & Acknowledgement Form

Environmental Process Evaluation Title: Tandem Van De Graaff Facility

Environmental Aspects: Industrial Waste, Hazardous Waste, Radioactive Waste, Atmospheric Discharges, PCBs, Storage/Use of Chemicals, Storage/ Use of Radioactive Materials

Contacts for Further ESHQ Information:
Associate Chair for ESHQ, E. Lessard
Head of ESHQ Division, R. Karol
Environmental Coordinator, J. Scott
Environmental Compliance Representative, M. VanEssendelft
ESH Coordinator, A. Etkin
Industrial Hygienist, P. Cirnigliaro
Radiological Control Division Representative, P. Bergh
Procedures Coordinator, L. DiFilippo
Quality and Assessment Manager, D. Passarello
Self Evaluation Program, J. Maraviglia
SHS Representative, E. Lacina
Source Custodian, P. Cirnigliaro
Tier 1 Coordinator, A. Etkin
Training Manager, J. Maraviglia
Training Records, A. Luhrs
Work Control Manager, P. Cirnigliaro

Course Objective: Because your work activities have been identified as having a significant potential to impact the environment, this course has been designed to provide you with the job-specific information that you must know to protect the environment.

1) What potential impacts to the environment are associated with your activities?

- Hazardous, radioactive and industrial wastes are generated
- Radioactive gasses may be released to the atmosphere during accelerator operations with protons or deuterons
- Chemicals may be released to the site sanitary sewer system.

2) What consequences may result if your operations were to impact the environment?

- Hazardous, radioactive or industrial waste mismanagement could contaminate the environment and/or incur regulatory penalties
- Improper water discharges to the sanitary sewer system could contaminate groundwater and/or result in a violation of the BNL State Pollutant Discharge Elimination System (SPDES) permit
- Unmonitored atmospheric discharges could contaminate the environment, create public radiation exposures and/or violate federal Clean Air Act requirements
- Improper release of radioactive materials to uncontrolled areas may result in enforcement actions under Federal Rule 10CFR835
- Improper handling of waste can create loss of regulator and public trust

3) What benefits or positive effects would you notice with improved environmental performance?

- Safer, cleaner workplace
- Clear roles and responsibilities
- Improved relationship with regulators and the public
- Control of disposal costs
- Reduced emissions

4) What role and responsibility do you have for these potential impacts and environmental performance?

- To ensure hazardous, radioactive and industrial wastes are handled according to C-A procedures
- To ensure alarms and other controls are tested as required
- To take action when alarms sound or when controls fail
- To report unexpected water releases or spills
- To create and keep appropriate records relative to operational controls
- To contact supervision if unsure of how to perform the work or if the procedures are unclear or incorrect

5) What controls or procedures are implemented to reduce the potential for emergency?

- C-A OPM 8.20, Procedure for Handling and Disposing of Hazardous Waste
- C-A OPM 8.20.2, Radioactive Waste Disposal
- C-A OPM 8.22, Handling and Disposal of Non-Hazardous and Recyclable Solid Waste
- C-A OPM 8.20.1, C-A Hazardous Waste Trailer (HWT) (90 Day Accumulation Area)
- C-A OPM 1.15, Liquid and Airborne Effluents
- C-A OPM 1.14, General Requirements for Liquid Storage and Outdoor Storage
- C-A OPM 2.28, C-A Procedure for Work Planning and Control for Operations
- Tier I program and self-assessments

6) How would you respond in an emergency to reduce the potential for environmental impact and what actions could be taken to mitigate the event?

- See C-A OPM 3.0, Local Emergency Plan for the C-A Department
- See C-A OPM 12.4, Chemical Spill Response
- See C-A OPM Chapter 10, Occurrence Reporting
- Call Spill Response Hotline – X2222 or 911 (If calling from a cell phone, dial (631) 344-2222)

7) What pollution prevention and waste minimization techniques have been or could be considered to reduce or eliminate the potential to impact the environment?

- Zeplon spray lubricant in use at TVDG contains 60 to 99% 1,1,1 trichloroethane (methyl chloroform). Methyl chloroform is a class I ozone depleting substance and should, to the extent practical, be replaced with another product that does not contain ozone depleting substances.

Suggestions or comments about pollution prevention or waste minimization are welcome by C-A management.

8) Are there any key Environmental-specific Competency Requirements for this position?
   - None

Additional Environmental Information:

Click on the items below to learn more about Tandem Van De Graff Operations.

- Process Assessment for Tandem Van De Graff Operations
- Environmental Management Program
- Operational Control Form for Tandem Van De Graff Operations